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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/026,121	12/17/2001	Sergiy Victorovich Vasylyev		5045

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EXAMINER

ROBINSON, MARK A

ART UNIT	PAPER NUMBER
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2872

DATE MAILED: 06/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

10/026,121

Applicant(s)

VASYLYEV ET AL.

Examiner

Mark A. Robinson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3,5-11 and 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Hockman Re 30,027.

Regarding claims 1,5-10 and 14-16, Hockman shows in figs. 4 and 5 a solar collection apparatus including a plurality of spaced apart, parallel concave reflectors(16) which satisfy the claimed types of curves, and separate energy receiving means (tubular absorber 20) receiving energy from the reflectors, wherein the rear ends of the reflectors face the energy receiving means and are inclined towards each other.

Regarding claim 2, note that some of the incidence angles fall between 45 and 90 degrees.

Regarding claim 3, Hockman's reflectors meet the limitation "designed and positioned to minimize screening and shadowing on other said mirrored surfaces" since light is able to impinge on

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all of the reflectors. Note that any specific "design" or "position" which enables this function has not been specified.

The orientation of Hockman's mirrors satisfies the angular requirement of claim 11 as shown in fig. 5.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 4 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hockman.

Regarding claim 4, Hockman does not show planar mirrored surfaces. However, curved collector arrangements comprised of a plurality of planar surfaces are well known in the art. Such an arrangement would have been obvious in Hockman's device in order to provide a simplified curved reflector profile which is easier to manufacture.

Regarding claim 17, although not taught by Hockman, mirror positioning means are well known for light collecting devices.

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It would have been obvious to the ordinarily skilled artisan at the time of invention to use such a tracking system with Hockman's device in order to maximize the amount of light collected by the device.

5. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hockman in view of Cornwall et al of record 5,180,441.

Although not taught by Hockman, photovoltaic cells are common in solar collection devices and an example is shown by Cornwall (col. 1 lines 35-44). It would have been obvious to the ordinarily skilled artisan at the time of invention to include a photovoltaic cell (along with heat sink) in Hockman's device in order to enable production of electricity from collected solar radiation.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wartes and Harrison show various arrangements for collecting solar energy.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Robinson whose telephone number is (703) 305-3506.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cassandra Spyrou can be reached at (703) 308-1687. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

MR

5/27/03


MARK A. ROBINSON
PRIMARY EXAMINER